

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improvements in Work Holders for use in Grinding Plane Irons and other Cutting Tools.

I, FRANZ WOBST, a citizen of Czechoslovakia, of 682, Zeidlerstrasse, Schluckenau, Nordböhmen, Czechoslovakia, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to work holders for holding plane irons and other cutting tools while they are being ground, the work holder being of the kind having means for coarse adjustment and also for fine adjustment of the grinding angle at which the tool is held.

According to my invention the two adjusting devices are incorporated in a work holder adapted to rest on some part of the grinding apparatus, the coarse adjustment being effected by means of an adjustable leg of the work holder, and the fine adjustment by means of an adjusting screw pivoted to a pivoted work rest, the screw working in a rotatable nut which is slidable in a slotted portion of the work holder.

The use of a screw pivoted to a pivoted work rest and passing through an eye, with nuts for adjusting it, has heretofore been proposed in connection with knife grinders.

My invention includes also a stand for the work holder, adapted to serve as a convenient gauge for resetting the work rest at any grinding angle which has by previous grindings or tests been found to be appropriate.

This stand is constructed for holding the work holder in a predetermined position thereon, and has an abutment, which can be adjusted so that it abuts against the edge of a tool fixed on the work rest, when the rest is adjusted at any selected angle. Consequently this angle can be found, in the case of resetting, by adjusting the angle of the work rest till the tool edge meets the abutment.

An appliance according to the invention is shown in the annexed drawings in which

Fig. 1 is a vertical section of the work holder,

Fig. 2 a vertical section of the stand,

Fig. 3 a plan view of the work holder, partly in section and with a part thereof removed, and

Fig. 4 a front view of the work holder.

The appliance shown has a box frame *a*, which may be of cast or malleable iron or other suitable material, including hard wood, and to this frame a work rest *b* is pivoted at *c*. A screw *d* is pivoted to the work rest at *e*, and works in a nut *f* for adjusting the angle of inclination of the work rest *b*. The nut *f* is slidable in a slot *g* in an inclined portion of the frame *a*, the nut having a circular groove, whereby it is engaged with the portions of the frame bordering the slot *g*. The work rest *b* has two lateral lugs *h* connected to each other by a crossbar *i*. When the work, e.g. a plane iron *j*, has been placed on the work rest *b* a plate *k* is laid upon it, the plate having projecting portions *m* which abut against the lugs *h*. Then a ribbed clamping member *l* having projecting portions *n* and a screw *o* is placed with its front edge *p* on the work, the screw *o* on the plate *k*, and the reinforcing ribs of the member *l* against the crossbar *i*, and the screw *o* is adjusted to clamp the work on the work rest *b*.

At the sides the frame has perforated lugs *v* for inserting handles *w*, one of which is shown in Fig. 3.

At the rear of the frame there is a vertically adjustable leg *s*, which is pressed against abutments *u* by means of set screws *t*, for fixing it at the selected height. In the example shown this leg is, for use with a grinding wheel, provided with a roller *q* pivoted at *r*, which may, for example, consist of metal, wood or rubber, and is adapted to rest on the grinding wheel, the leg itself being of cast iron or other suitable material. Where the grinding is to be done on a stationary stone the leg or foot may simply be a block of hard wood or the like.

The stand *x* shown in Fig. 2 serves not only as a convenient support for the workholder when not in use, but also as a gauge for use in adjusting the work rest after the suitable angle has been determined by previous grindings or tests. For

this purpose the stand has an aperture receiving the roller or foot, which maintains the holder in a predetermined position on the stand, and a support for the front part of the frame *a*, with an abutment *y* (generally of wood) for the edge of the tool to be ground. This abutment is adjustable lengthwise of the stand, and is fixed by means of a screw *z*. When adjusted to abut against the edge of a tool held at the proper angle this abutment can serve as a gauge for use in resetting the tool rest.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A work holder for use in grinding plane irons and other cutting tools, comprising a support adapted to rest upon part of the grinding apparatus, with a leg which is adjustable for coarse adjustment of the grinding angle, and a pivoted work rest on said support, with a screw pivoted to said work rest, working in a rotatable nut slidable in a slotted portion of the support, for fine adjustment of the grinding angle of said work rest.

2. A work holder as claimed in claim 1, with a crossbar above the work rest, and a clamping member insertable between said crossbar and the work, said clamping member having a front portion adapted to rest on the work and having at the rear a screw adapted to bear on the work and press the clamping member against the crossbar.

3. A work holder as claimed in claim 1 or 2, having a roller at the foot of the adjustable leg.

4. A work holder as claimed in any of the preceding claims, having a stand with means for maintaining the holder in a predetermined position thereon, and with an abutment which is adjustable thereon, so that it can be set to abut against the edge of a tool fixed on the tool rest, when the rest is at any selected grinding angle.

Dated this 3rd day of April, 1929.

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[This Drawing is a reproduction of the Original on a reduced scale.]

